

P22019.A02

<sup>14</sup>  
a laser for emitting a beam source;

<sup>16</sup>  
a beam shutter for stopping the beam output returning;

<sup>18</sup>  
a 3dB optical fiber coupler for separating the beam strength from said lensed fiber and  
laser by 50:50;

<sup>20</sup>  
a beam detector for detecting reflected beam strength from the end of said lensed  
fiber;

<sup>22</sup>  
a RC filter for filtering said detected beam;

<sup>24</sup>  
a microprocessor for analyzing said detected beam strength;

<sup>26</sup>  
an amplifier for amplifying the strength of electric signals according to the control of  
*B1* said microprocessor;

<sup>28</sup>  
a PZT driver for driving PZT according to the strength of electric signals amplified  
by said amplifier;

<sup>30</sup>  
a X-Y axis scanner driver for driving a X-Y axis scanner according to the control of  
said microprocessor;

a X axis scanner for driving the X axis according to the driving of the X-Y axis  
scanner; and

a Y axis scanner for driving the Y axis according to the driving of the X-Y axis  
scanner.

2. (Clean Copy) A method for measuring the thickness of a material using the focal length of a lensed fiber, wherein said lensed fiber generates a form of Gaussian Beam and is attached to PZT in order to detect the quantity of beam while the lensed fiber is moved vertically against the material to be measured.

B1  
Cont.

3. (Clean Copy) The apparatus as claimed in Claim 1, wherein the thickness of said material is measured by using a lensed fiber whose focal length is longer than the beam coherent length of the beam.

B2

5. (Twice Amended-Clean Copy) The method as claimed in Claim 2, wherein instead of the lensed fiber, a normal lens is used for measuring the thickness of the material.

8. (Clean Copy) The apparatus as claimed in Claim 1, wherein instead of the lensed fiber, a normal lens is used for measuring the thickness of the material.

B3

9. (Clean Copy) The apparatus as claimed in Claim 3, wherein instead of the lensed fiber, a normal lens is used for measuring the thickness of the material.

10. (Clean Copy) The apparatus as claimed in Claim 4, wherein instead of the lensed fiber, a normal lens is used for measuring the thickness of the material.

X

### REMARKS

Claims 1-3, 5, 8-10 have been amended to define the features of the invention more properly and to improve the Examination process. The amendments to the claims are